

**For a Free Quote:**

**Web: [EnergyPal.com/solar](http://EnergyPal.com/solar)**

**Call: 1-800-990-3725**

**Email: [contact@energypal.com](mailto:contact@energypal.com)**

# **EnergyPal**

## **Solar Panel Guide Specification Data Sheet**

**IREX Energy Joint Stock Company**

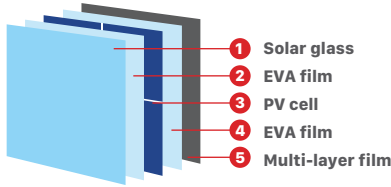
**IR180M-220M-72**

**IR190M-72**

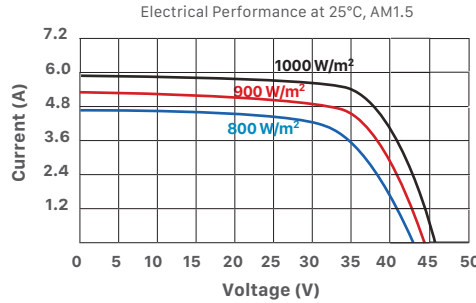
Also available on the web at  
[EnergyPal.com/irex-energy-joint-stock-company-solar-panels/ir190m-72](http://EnergyPal.com/irex-energy-joint-stock-company-solar-panels/ir190m-72)

# 125 SERIES MONOCRYSTALLINE

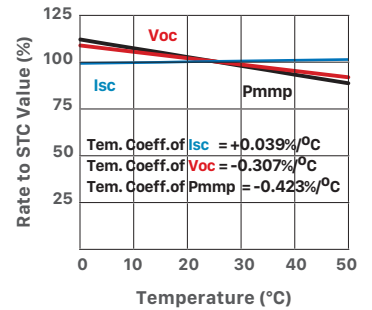
SOLAR MODULE: 180 W, 185 W, 190 W, 195 W, 200 W, 205 W, 210 W, 215 W, 220 W



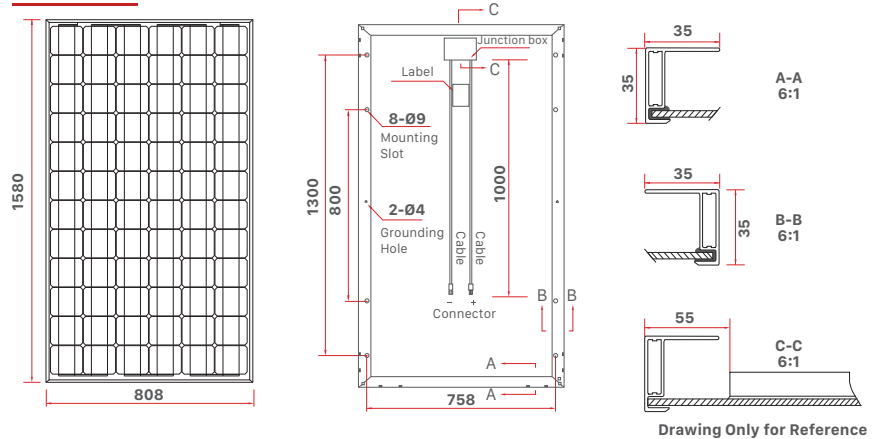
## PERFORMANCE



Temperature Dependence of Isc, Voc & Pm at 1000 W/m<sup>2</sup>, AM1.5



## STRUCTURE



### ELECTRICAL CHARACTERISTICS STC

	IR180M-72	IR185M-72	IR190M-72	IR195M-72	IR200M-72	IR205M-72	IR210M-72	IR215M-72	IR220M-72
Maximum Power (Pmax)	180 W	185 W	190 W	195 W	200 W	205 W	210 W	215 W	220 W
Power Tolerance	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%	0 ~ 3%
Module Efficiency	14.1%	14.5%	14.9%	15.3%	15.7%	16.1%	16.5%	16.9%	17.2%
Maximum Power Current (Imp)	5.08 A	5.21 A	5.34 A	5.41 A	5.52 A	5.62 A	5.68 A	5.78 A	5.86 A
Maximum Power Voltage (Vmp)	35.44 V	35.53 V	35.59 V	36.06 V	36.24 V	36.50 V	36.98 V	37.21 V	37.56 V
Short Circuit Current (Isc)	5.41 A	5.54 A	5.68 A	5.75 A	5.90 A	5.97 A	6.04 A	6.11 A	6.22 A
Open Circuit Voltage (Voc)	44.30 V	44.60 V	44.80 V	45.00 V	45.20 V	45.40 V	45.70 V	46.01 V	46.49 V

Values at Standard Test Conditions (STC: Air Mass AM 1.5, Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C)

### ELECTRICAL CHARACTERISTICS NOCT

	IR180M-72	IR185M-72	IR190M-72	IR195M-72	IR200M-72	IR205M-72	IR210M-72	IR215M-72	IR220M-72
Maximum Power (Pmax)	131.40 W	135.05 W	138.70 W	142.35 W	146.00 W	149.65 W	153.30 W	157.00 W	161.00 W
Maximum Power Current (Imp)	4.01 A	4.12 A	4.22 A	4.27 A	4.36 A	4.47 A	4.49 A	4.58 A	4.65 A
Maximum Power Voltage (Vmp)	32.68 V	32.77 V	32.94 V	33.26 V	33.50 V	33.56 V	34.08 V	34.29 V	34.63 V
Short Circuit Current (Isc)	4.33 A	4.43 A	4.54 A	4.60 A	4.72 A	4.78 A	4.83 A	4.89 A	4.96 A
Open Circuit Voltage (Voc)	41.20 V	41.48 V	41.66 V	41.85 V	42.04 V	42.22 V	42.50 V	42.72 V	43.18 V

Values at Nominal Operating Cell Temperature (NOCT: Wind Speed 1 m/s, Irradiance 800 W/m<sup>2</sup>, Ambient Temperature 20°C)

## MECHANICAL CHARACTERISTICS

Cell Type	125 x 125 mm Monocrystalline, 72 (6x12) pcs in series
Solar glass	High Transmission, Low Iron, Tempered Glass with Anti Reflecting Coating
Frame	Anodized Aluminum Alloy type 6063 - T5
Junction Box	Rated current ≥ 15 A, IP ≥ 67, TUV & UL
Dimension	1580 x 808 x 35 mm
Output Cable	4 mm <sup>2</sup> (EU)/12 AWG (US), 900 mm
Weight	14 Kg
Installation hole Location	See Drawing Above

## PACKING INFORMATION

Container	20' GP	40' GP	40' HQ
Pallets per Container	14	28	28
Pieces per Container	420	840	896

## WORKING CONDITIONS

Operating Temperature	- 40°C to + 85°C
Maximum System Voltage	1500 VDC (IEC) / 1500 VDC (UL)
Maximum Series Fuse Rating	20 A (IEC) / 20 A (UL)
NOCT	45 ± 2
Application Class	Class A